INDIANA DIVISION OF FISH&WILDLIFE

Work Plan Number

202758

S trat Plan: Rivers and Streams	**Date submitted:** 10/16/2001
Submitted By: Bob Ball	**Last Revision Date:**
Position Title: Fisheries Biologist	

Title: Angler Survey of East Fork and Mainstem White River

Time period covered in plan		**Location:**
Start Date:	**End Date:**	E. Fork White R. (Williams Dam) plus Mainstem WR
04/01/2002	03/31/2005	

Objectives:

Estimate total recreational hours, angler hours, angler harvest, and commercial pressure and harvest for the lower East Fork White River and Mainstem White River.

Problem:

Problem 5 of the Rivers and Streams Strategic Plan states: "Lack of scientific data limits the ability to ensure optimum angler use or monitor the changes in fish resources." One of the strategies to solve this problem is to conduct angler surveys.
Problem 1 of the Walleye and Sauger Objective of this Strategic Plan also noted the lack of scientific data is limiting the management of these species. A general fisheries survey of the East Fork, West Fork and Mainstem White River is scheduled at the approximate same time, using electrofishing gear. The angler survey will complement the fishery survey by adding information on species generally not caught by electrofishing, particularly paddlefish and shovelnose sturgeon, plus providing information on which species are primary targets of anglers.

Justification:

Large rivers make up a significant portion of Indiana's public resource. In Districts 6 and 7, 34.8% and 40.7% of anglers listed large rivers as their first, second, or third most fished areas (Shipman, personal communication). Currently, there is very little baseline data on the recreational use of this river segment, and what there is dates back to Darryl Christensen's work from 1967, in which he quantified angler effort at Williams Dam and Hindostan Falls for brief periods of the spring. The current plan will provide estimates of total recreational hours, angling hours, and commercial fishing hours and harvest of a major portion of the river for a seven-month period. Comparative data for the fish population are to be provided under a separate work plan during the same period. It is critical that the amount and value of the recreation found there be measured. For example, without harvest information, the growth and length frequencies of various game species will be difficult to interpret. It will be also be of use in evaluating regulations and in planning further river fisheries studies. The angler information could also be used to estimate recreation value of other medium-sized rivers in Indiana.

Procedures:

A recreational use and commercial fishing survey will be conducted on the lower East Fork White River from WilliamsDam to the mouth of the Mainstem White River at East Carmel, Indiana. Preliminary work to determine high-flow and low-flow survey boat routes and write a creel survey analysis program will be done in the summer and fall of 2002, with the actual survey taking place in 2003. The District 2 Assistant Fisheries Biologist will write the program in coordination with the project leader. A statistician will be contracted in 2002 to develop formulas for variances and confidence limits so that these can be built into the analysis spreadsheet or into the SPSS statistical application, which will be purchased for this project.

Instantaneous counts of recreational users will be made by a light plane flying the river length 12 times a month on a schedule which will provide at least three alternate days per month for flights cancelled due to weather or other problems. Total effort will be 84 flights, each up to 6 hr long, divided among monthly periods from April 1 to October 31. Each month will be analyzed as a separate stratum, with weekend days/holidays and week days being separate substrata. An observer will fly on each flight, with the pilot counting fishers and others on his side of the plane, the observer those on the right side, and recording the information. Observations will be recorded separately for designated stream segments. Flights will probably originate from the Bedford airport. The observer position will be supplied from a combination of positions, Southern Research Biologist, D6 Assistant Biologist, and Research and D6 Aides. This work will require about 100 hours a month, weekends as well as week days.

An estimate of angler catch rates will be generated from a combination of access point and boat creel clerk trips conducted during the same period. In addition, fisher counts will also be made during alternating periods of each day (interviews of fishers alternated with counts at stations scheduled beforehand). This component of the

survey will use a non-uniform probability design to assign clerk hours to river segments based on use as determined from prior field data. Two clerks will be hired for this purpose, one supervised by the project leader, one supervised by the Big Rivers Biologist. The clerks will use boats as much as possible, supplemented with access point surveys in periods of dangerously high water. A 16-foot jon boat with 25-hp outboard will be provided to each clerk, along with a truck and boat trailer. Trucks will be obtained from back-ups available at that time. Equipment will be arranged by research. Creel clerks will work 37.5 hours a week, but with approval to work 4-day weeks (9.375 h/d), in order to manage the long river segments between access points and use the time required to launch and load boats more efficiently.

A statistician will be contracted in 2002 to advise on the best schedule plan, data collection details, and analysis methods. Since angler counts will be made from both airplane and boat observers, the statistician will devise the best way to merge estimates. If necessary, separate variances will be generated on the two sources.

Training of observers and clerks will take place the last two weeks of March 2003. Accordingly, money will be allotted for this in the budget, and clerks will be ready to work the last week of March.

A recreational use/angler survey report will be due March 15, 2005. An interim report will be due March 15, 2004.

OtherPersonnel: 8F9 - Big Rivers Project; 8F2 - Fish District 2; 8F6 - Fish District 6; 8FS - Fish South - Supervisor; 8FR - Fisheries South Research;

Project Leader: Bob Ball

Strat Objective:

General Objectives 1 and 2 of Rivers and Streams Strategic Plan. Increase the number of fishing trips by 10% (1,846,300 to 2,030,930) and increase the percentage of river anglers who indicate that Indiana fishing quality is improving from 21% to 31% by 2008. Maintain inland commercial fish harvest at 165,360 lbs. per year through 2008. Also, applies to Black Bass Objective, Catfish Objectives 1 and 2, Other Fish Objectives 1 and 2, and Walleye and Sauger Objective.